CLAIMS:

1. Method of writing information in a storage layer (2A, 2B) of a multi-layer optical storage medium (2) comprising two or more storage layers (2A, 2B), the method comprising:

monitoring a focus condition of an optical write beam (32b);

inhibiting the writing process in case of an axial focus displacement event.

2. Medium access device (10), capable of writing information in a storage layer (2A, 2B) of a multi-layer optical storage medium (2) comprising two or more storage layers (2A, 2B);

the medium access device (10) comprising:

light beam generating means (31) for generating a write light beam (32);

focussing means (34) for focussing the write light beam (32) in a focal spot (F) at a target storage layer (2A);

write inhibit means (64) for inhibiting a writing process in case of an axial focus displacement event.

3. Medium access device according to claim 2, further comprising a driver circuit (63) for driving the light beam generating means (31) in accordance with a data signal (S_{DATA}) representing data to be written, the driver circuit (63) having a control input (63a); wherein the write inhibit means (64) have an output (64a) coupled to said control input (63a) of the driver circuit (63), the write inhibit means (64) being designed to generate a command signal ($S_{INHIBIT}$) for the driver circuit (63) such as to effectively inhibit the driver circuit (63) in case of an axial focus displacement event.

4. Medium access device according to claim 2, wherein the write inhibit means (64) has at least one input (64b, 64c, 64d) for receiving at least one input signal capable of indicating an axial focus displacement;

the write inhibit means (64) being designed to monitor at least one of its input

signals and to inhibit the writing process if at least one of the input signals is indicative of the occurrence of an axial focus displacement event.

5. Medium access device according to claim 2, wherein the write inhibit means (64) has at least one input (64b, 64c, 64d) for receiving at least one input signal capable of indicating an axial focus displacement;

the write inhibit means (64) being designed to monitor at least two of its input signals and to inhibit the writing process if at least two of the input signals are indicative in a correlated way of the occurrence of an axial focus displacement event.

6. Medium access device according to claim 2, wherein the write inhibit means (64) has at least one input (64b, 64c, 64d) for receiving at least one input signal capable of indicating an axial focus displacement;

the write inhibit means (64) being designed to monitor an input signal, to calculate an axial focus displacement from the input signal, and to decide that the input signal is indicative of an axial focus displacement event if the calculated axial focus displacement exceeds a predetermined displacement threshold.

7. Medium access device according to claim 2, wherein the write inhibit means (64) has at least one input (64b, 64c, 64d) for receiving at least one input signal capable of indicating an axial focus displacement;

the write inhibit means (64) being designed to monitor an input signal, to monitor for the possible occurrence of a predefined characteristic feature of the input signal, and to decide that the input signal is indicative of an axial focus displacement event if such characteristic feature occurs.

8. Medium access device according to claim 2, wherein the write inhibit means (64) has at least one input (64b, 64c, 64d) for receiving at least one input signal capable of indicating an axial focus displacement;

the write inhibit means (64) being designed to monitor at least one of its input signals, to determine the speed with which said at least one of its input signals changes in time (first or higher time-derivative), and to decide that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes.

9. Medium access device according to claim 8, the write inhibit means (64) being designed to inhibit the writing process if the time-derivative of said at least one of its input signals predicts an axial focus displacement event, i.e. even before the axial focus displacement event actually occurs.

10. Medium access device according to claim 4, further comprising at least one vibration/acceleration sensor (81);

the write inhibit means (64) being designed to monitor at least an output signal from the at least one vibration/acceleration sensor (81).

11. Medium access device according to claim 4, further comprising at least one optical detector (35) for receiving light (32d) reflected from the storage medium (2);

the write inhibit means (64) being designed to monitor at least one signal derived from at least one detector output signal.

12. Medium access device according to claim 11, the write inhibit means (64) being designed to monitor at least a signal (S_{CA}) corresponding to the reflected central aperture signal obtained from a forward-sense diode of the sensor (35), or to monitor at least a signal (S_{FE}) corresponding to the focal error signal (FE), or to monitor at least a signal (S_{FEI}) corresponding to the focal error signal (FE) integrated with a predetermined time constant.

13. Medium access device according to claim 2, capable of handling multi-layer optical discs, especially DVD-discs or BD discs.